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Christine Kump-Mitchell
Project Coordinator
Hazardous Waste Program
Missouri Department of Natural Resources
7545 South Lindbergh, Suite 210
St. Louis, MO 63125-4839

Re: Modine Manufacturing Co., Corrective Action Order on Consent

Dear Ms. Kump-Mitchell:

The Missouri Department of Natural Resources (MDNR) believes that additional characterization is necessary beneath the Modine facility and along the off-site sewer line where the MDNR conducted sampling in June 2006. The MDNR requested, in a letter dated December 11, 2006, that Modine prepare a Work Plan for an additional investigation in these two areas to further assess the extent of contamination. (the "Dispute Letter"). The contaminant of concern in both areas is trichloroethene (TCE).

In accordance with Section XVI of the Corrective Action Abatement Order on Consent (the "Order"), Modine Manufacturing Company ("Modine") hereby provides written notice that it is objecting to the Dispute Letter's request for a Work Plan requiring (1) additional investigation of the sewer line that is controlled by the City of Camdenton and not part of the facility and (2) additional investigation underneath the facility. In support of its objection to the Dispute Letter, Modine states:

I. MDNR's Corrective Action Authority Does Not Cover the Sewer Investigation

The Dispute Letter states that Modine is required to do a sewer investigation because leakage from a sewer is not covered by the domestic sewage exclusion. However, Modine is not relying on the domestic sewage exclusion as the basis for asserting the Department's lack of jurisdiction. Instead, the very guidance document that the Department relies on to support its position that the domestic sewage exemption does not apply, supports Modine's position that the Department does not have corrective action authority over the off-site sewer. See March 10, 1997 EPA Memo at Question 3. Specifically, the document states that the issue is whether the sewer pipes from which the materials leaked are part of the facility. Whether they are part of the facility depends on whether they are "controlled" by the owner/operator. The factors used in making that determination are: (1) whether the facility owner owns the pipes; (2) whether Modine is responsible for maintenance of the sewer line; (3) whether the line is dedicated to the

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facility. Because [redacted] answer to all three of these question[redacted] no, Modine has no control over the sewer and, with no control of the sewer by Modine, the sewer cannot be part of the facility subject to corrective action.

II. Neither Investigation Required by the Dispute Letter is Necessary

Even if the Department had jurisdictional authority to use corrective action to require the off-site sewer investigation, Modine disagrees with the need for either additional investigation because neither investigation satisfies the criteria of being necessary to protect human heath and the environment (See Section VIII of the Order). Based on the results of our most recent investigation in October 2006, and previous investigations and site work conducted by Modine and Hamilton-Sundstrand, and the findings in the MDNR approved Feasibility Study (FS) prepared by SECOR on behalf of Hamilton-Sundstrand, MDNR's request for additional investigation is not technically supported as necessary to protect human health and the environment.

A. Current Definition of Extent of Contamination Supports No Further Investigation

- The results obtained from the off-site sewer line sampling conducted in June 2006 by MDNR showed that only one of 12 samples collected from 5 probe locations exceeded the TCE site specific cleanup level (SSCL) of 380 ug/kg developed in March 2002. The SSCL was developed to define the concentration in soil that would be theoretically necessary for TCE to leach at sufficient concentrations to continue to be a source for groundwater contamination. The one sample that exceeded the SSCL for TCE was collected from the 90 degree bend in the sewer line along Bent Tree Lane. The sample was collected from a depth of 21.5 feet and had a TCE concentration of 2,570 micrograms per kilogram (ug/kg). Samples were collected at irregularly spaced intervals, and no other sample points (probes) contained TCE concentrations above the SSCL or the cleanup levels for Missouri (CALM) soil target concentrations (STARC) leaching to groundwater (Cleach) level. Thus, these results support the conclusion that the lateral extent of contamination associated with the sewer line is limited.
- Further demonstration of the apparent minimal lateral migration of TCE in site soil is illustrated in the data (both historic and recent) from the mudpit sampling. Historic samples collected from the excavation of the mudpits in October 1997 show that lateral extent was defined in all directions other than to the north at both Mudpits #1 and #3 (Dames and Moore, 1997). Soil samples collected and analyzed during the removal and replacement of the on-site sewer line in July, 2000 showed no contamination (letter to MDNR dated February 13, 2003). Recent samples collected in October 2006 from probes originating on the east side of the former mudpits were advanced at an angle of 30 degrees to achieve sample collection from beneath the building footprint showed TCE concentrations in excess of the SSCL at 3,200 ug/kg (MDNR split 2,150 ug/kg) at Mudpit #1 and 560 ug/kg (MDNR split 537 ug/kg) at Mudpit #3. These results, when combined with the soil remediation activities and the on-site sewer line replacement soil analysis results, show adequate definition of these areas.

The lack of lateral migration is again demonstrated by adjacent samples. Samples collected from the horizontal boring to assess contamination near the former monorail vapor degreaser and still M567 conducted in October 2006 did not have a TCE concentration greater than 690 ug/kg (MDNR split 640 ug/kg), collected at a location 85 feet east of the west wall. Also, a sample collected at 120 feet east of the west wall had a TCE concentration below the SSCL with a result of 240 ug/kg (MDNR split 80 ug/kg). This sample was collected within 10 feet of the 1997 probe location P-7 which exhibited the two highest TCE concentrations. It was also

within 5 feet of former [redacted]nd augered boring (HA-1) advanced b[redacted]w Engineering in 1991, which contained a TCE concentration of 3,000 ug/kg.

It should be noted that the SSCLs, calculated in 2002, were developed in accordance with guidance provided in Tier 2 Cleanup Levels of CALM and were determined based on:

- Dividing the total volatile organic compound (VOC) concentration of each parameter by the synthetic precipitation leaching procedure (SPLP) VOC concentration of each parameter for all samples analyzed;
- Calculating the average ratio for each analytical parameter by adding the individual ratios together and dividing the result by the total number of ratios calculated;
- Calculating a site specific soil cleanup level by multiplying the average ratio for each analytical parameter by the MDNR CALM STARC level for the individual parameter.

Those samples that had detectable total VOC concentrations were used to develop the ratios. As a conservative measure, the SPLP VOC reporting limit was used in the denominator for calculating ratios for those samples with non-detectable SPLP VOC results.

B. Comparability of Levels of Contamination in Hulett Lagoon RI/FS Support No Further Investigation

The highest concentrations found at the sewer line, at the probe east of Mudpit #1, and during the historic investigation under the Modine facility[1] are directly comparable to the highest concentrations present in samples collected from the former Hulett Lagoon (lagoon) during the Remedial Investigation (RI) conducted by Hamilton Sundstrand in 2000. The sample from Probe GP-9 collected from the lagoon during the RI had a TCE concentration of 3,100 ug/kg. MDNR also collected samples from the Hulett Lagoon in 1999. Their analysis found one sample in probe 01 with a concentration of 9,500 ug/kg.

Not only were the highest levels detected at the Hulett Lagoon comparable to the highest soil levels found at the Modine facility and along the sewer but the highest Hulett Lagoon samples also show a similar lack of lateral migration as those at the Modine facility and along the sewer. Specifically, the sample collected from the lagoon by Hamilton-Sundstrand is bound by samples that had TCE concentrations below detectable levels. The MDNR sample location from the lagoon is bound in all directions by samples that contained TCE at concentrations below the SSCL, and all but one sample were at concentrations below detectable levels.

As part of the RI, samples collected were also analyzed via the Toxicity Characteristic Leaching Procedure (TCLP), a more vigorous digestion process than employed by the SPLP process used to derive the SSCLs. These samples showed that no measurable portion of TCE was leachable under the conditions of the test. This fact led to the conclusion drawn in the RI, and the following FS, that the leaching of TCE from soil to groundwater should not contribute to TCE concentrations in groundwater. Therefore, the leaching to groundwater pathway was eliminated from consideration as part of the Targeted Risk assessment (TRA) prepared as part of the FS. A similar TCLP assessment was conducted on soils that were collected from under the building floor during the reconstruction of the facility in 1996-97. No total organic results were obtained but TCLP results were completed for the soil samples and were shown to be non-detect for all organic constituents, similar to the results for soil in the RI and FS. Thus a similar

[1] The highest concentration from probes advanced in the vicinity of the former monorail vapor degreaser in 1997 were 4,000 ug/kg and 3,400 ug/kg.

conclusion, that the leaching to groundwater pathway, does not exist and should be eliminated from consideration, should be reached for any soil under the building and for soils along the sewer. In fact, below the building, the groundwater pathway is further minimized by the capping of the soil area by the building floor, eliminating infiltration and a driver to the groundwater.

The lack of lateral migration coupled with the fact that the leaching from soil to groundwater pathway for exposure was demonstrated not to be a contributing factor at the highest concentrations found anywhere in the area strongly supports our conclusion that additional investigation for the purpose of delineation is not necessary. The FS, which was accepted and approved by the MDNR also states that any contribution to groundwater contamination from the remaining minimally impacted soil in the area would not alter the effectiveness of the preferred remedial alternative (i.e, pumping of the Mulberry Well).

Based on the substantial amount of evidence and the accepted conclusions from the previously completed investigations, the Hamilton-Sundstrand RI and FS and the on-site soil remediation activities, Modine strongly feels that no further investigation work is necessary for this site and objects to the Dispute Letter's request for such further investigation. In the Hulett Lagoon FS, the Department has already signed off on not requiring additional work to address essentially the same type and level of contamination found in the Hulett Lagoon. Especially, given that the Department is addressing the same groundwater system and overall remedy in the Hulett Lagoon RI/FS process, there is no basis for a different conclusion with regard to the similar contamination found at the sewer or under the building nor is any such basis stated in the Dispute Letter.

Respectfully Submitted,

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